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10/588,355

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EXAMINER

KOTTER, KIP T

ART UNIT

PAPER NUMBER

3617

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DELIVERY MODE

11/12/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 10/588,355 | Applicant(s) ONO, KOTARO | |
| | Examiner KIP T. KOTTER | Art Unit 3617 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 4-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 August 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>3 August 2006 and 29 August 2006</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. The drawings are objected to because of the following informalities:
 - The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: **Bt** and **St**.
 - The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: **40** and **41**.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. 35 U.S.C. 112, first paragraph, requires the specification to be written in "full, clear, concise, and exact terms." The specification is replete with terms which are not clear, concise and exact. The specification should be revised carefully in order to comply with 35 U.S.C. 112, first paragraph. Examples of some unclear, inexact or verbose terms used in the specification are:

- The phrase "the light alloy wheels excellent in ornamental appearance are provided" in lines 14 and 15 of page 1.
- The phrase "mounting ratio or share of the light alloy wheels is increased to an extent that such light alloy wheels are mounted on vehicles at their assembly lines" in lines 16-18 of page 1.
- The phrase "The above indicates that as the larger becomes the obtained value, the larger becomes the resistibility against bending" in lines 18 and 19 of page 7.
- The phrase "while contours of the slope wall same with those for the tubular rim on outer rim flange are not required" in lines 21 and 22 of page 9.
- All references to claims in the specification. (for example, note line 8 of page 8 and line 14 of page 9)

A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

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Claim Objections

3. Claim 4 is objected to because of the following informalities:

- In line 2 of claim 4, the term “port” should be changed to – **part** – for consistency.
- In lines 4 and 6 of claim 4, the term – **an** – should be inserted before extension for clarity.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 4-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

Some examples of indefinite and unclear subject matter in the claims include:

- There is insufficient antecedent basis for the limitation “tire-mounting side” set forth in line 4 of claim 4 and “exterior contour of the rim” set forth in line 5 of claim 4.

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- The limitation “the junctures” in line 9 of claim 4 renders the claim indefinite as it is unclear whether “the junctures” refer to “a juncture” set forth in line 4 of claim 4 and “a juncture” set forth in line 6 of claim 4, or if “the junctures” refer to distinct junctures.
- The limitations “inclination”, “height”, “length”, and “wall thicknesses” in lines 11 and 12 of claim 4 are indefinite as it is unclear what structure these limitations refer to (i.e. inclination of..., height of..., etc...)
- The limitations “such as” and “mainly” in lines 11 and 13 of claim 4, respectively, render the claims indefinite because it is unclear whether the limitations following these phrases are part of the claimed invention. See MPEP § 2173.05(d).
- There is insufficient antecedent basis for the limitations “joints” and “hollow spokes” in line 2 of claim 7.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4-11, as best understood by Examiner, are rejected under 35 U.S.C. 103(a) as being unpatentable over Baumgartner (U.S. Patent No. 6,783,190 B1).

Baumgartner, in the embodiment of Fig. 5, discloses a light alloy wheel comprising an outer rim having a tubular rim part, the tubular rim part comprising: a bead seat (unlabeled

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portion of **31**), a hump (unlabeled portion of **31**), a slope wall (unlabeled portion of **31**) and an ornamental wall (unlabeled portion of **31**), the ornamental wall being arranged on a side opposite to tire-mounting side of the outer rim as shown in Fig. 5 and bridging from a juncture between extension from tire-mounting-side contour of the bead seat and exterior contour of the rim to a juncture between extension from tire-mounting-side contour of the slope wall and exterior contour of the rim; and a cavity **41** defined by the bead seat, the hump, the slope wall and the ornamental wall; wherein, with respect solely to the tubular rim part and at around joints between the cavity in the tubular rim part and hollow spokes **22**, **24**, part of or portion of either of the ornamental wall, the bead seat, the hump and the slope wall is modified in respect of thickness and is comprised of a flat wall and/or a curved wall so as to improve the geometrical moments of inertia as shown in Fig. 5 and described in lines 52-67 of column 1, lines 18-26 of column 2, and lines 21-33 of column 3; wherein the hollow spokes are jointed to the tubular rim part and wherein the tubular rim part has an opening at each of joints between the hollow spokes and the tubular rim part, so that cavities of hollow spokes communicate with the cavity in the tubular rim part as shown in Fig. 5 and described in lines 5-9 of column 3 and lines 18-26 of column 3; wherein the ornamental wall is at least partly, convex outwardly as shown in Fig. 5; and wherein an inner rim has a tubular rim part that is constructed as in the tubular rim part on the outer rim as shown in Fig. 5.

Although Baumgartner discloses a wheel that is formed and shaped to reduce weight and increase bending strength as described in lines 52-67 of column 1, Baumgartner fails to expressly disclose the shaping and wall thicknesses of the tubular rim part being set so that a ratio of cross-sectional area of the tubular rim part to that of a solid rim part is no more than 100% and the

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geometrical moment of inertia of the tubular rim part, about an axis that is parallel to the wheel axis and extends through centroid of a cross section of the tubular rim part, is no less than geometrical moment of inertia of a solid rim part, about an axis that is parallel to the axis of the wheel and extends through centroid of a cross section the solid rim part; and the geometrical moment of inertia of the tubular rim part, about an axis that is vertical to the axis of the wheel and extends through centroid of a cross section of the tubular rim part, is no less than the geometrical moment of inertia of the solid rim part, about an axis that is vertical to the axis of the wheel and extends through centroid of a cross section of the solid rim part, when assuming a solid rim part that is defined by the junctures and consisting of the bead seat, the hump and the slope wall and has a typical standardized shaping construction in respect of inclination, dimensions such as height and length and wall thicknesses for guaranteeing a required strength of the outer rim, and in conformity mainly with design specification of a tire.

It would have been obvious to one having ordinary skill in the art to have modified the shaping and wall thicknesses of the tubular rim part of Baumgartner so that its cross-sectional area is less than the cross-sectional area of a solid rim part to provide predictable results for decreasing the weight of the wheel. Further, it would have been obvious to one having ordinary skill in the art to have modified the shaping and wall thicknesses of the tubular rim part of Baumgartner so that its two-dimensional geometrical moment of inertia is greater than the two-dimensional geometrical moment of inertia of a solid rim part to provide predictable results for increasing the strength and rigidity of the wheel. Moreover, it would have been obvious to one having ordinary skill in the art, as a mechanical expedient, to have modified the shaping and wall thicknesses of the tubular rim part of Baumgartner so that its ratio of cross-sectional area to that

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of the solid rim part is no more than 100% and its ratio of geometrical moment of inertia to that of the solid rim part is no less than 100% based upon the intended use of the wheel, loading, materials used, and manufacturing process used, to achieve a desired strength-to-weight ratio.

Regarding claim 10, Baumgartner fails to expressly disclose at around joints between the cavity in the tubular rim part and the hollow spokes, augmentation and/or trim-wise rounding is made on inner faces of the hollow spokes and/or the tubular rim part.

Nonetheless, to have modified Baumgartner by rounding the inner faces of the hollow spokes and/or tubular rim part at around the joints between the cavity in the tubular rim part and the hollow spokes would have been obvious to one having ordinary skill in the art to provide predictable results for preventing stress concentrations.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references show other wheels with tubular rim parts.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KIP T. KOTTER whose telephone number is (571)272-7953. The examiner can normally be reached on 9:00-4:00pm est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samuel J. Morano can be reached on (571)272-6684. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KIP T KOTTER/
Examiner, Art Unit 3617

/Russell D. Stormer/

Primary Examiner, Art Unit 3617